Warm-up p. 714, 1. A volcano is an _____ in the Earth's crust through which _____ has reached the surface. Opening, magma

p. 714, 2. Any area where molten material reaches the surface is called a ______
Vent

p. 714, 3. Magma rich in _____ and ____ is very fluid and forms lava that flows great distances lron, magnesium



Warm-up p. 706, 1. What mountain range is shown on this page?, which is located in which continental plate? Andes, South American

p. 706, 2. Chains of oftenform at subduction zones
explosive, volcanic

p. 707, 3. The San-Andreas fault runs from _____ through _____ and out to sea north of San Francisco.
Mexico, California

Chapter menu

Resources

mountains

Section 2 Earthquakes and Volcanoes

Objectives

- Identify the causes of earthquakes.
- Distinguish between primary, secondary, and surface waves in earthquakes.
- **Describe** how earthquakes are measured and rated.
- Explain how and where volcanoes occur.
- Describe the different types of common volcanoes.



Of

Section 2 Earthquakes and Volcanoes

Volcanoes

- A volcano is any opening in Earth's crust through which magma has reached Earth's surface.
- Vent an opening at the surface of Earth through which volcanic material passes
 - Volcanoes generally have one central vent, but they can also have several smaller vents.
 - Magma that reaches Earth's surface is called lava.







Section 2 Earthquakes and Volcanoes

0

Volcanoes



Chapter menu

Resources

Copyright © by Holt, Rinehart and Winston. All rights reserved.

Section 2 Earthquakes and Volcanoes

......

Volcanoes, continued

- Shield volcanoes have mild eruptions.
 - Lava from shield volcanoes is very fluid and forms a gently sloping mountain.
 - Shield volcanoes are some of the largest volcanoes.



Section 2 Earthquakes and Volcanoes

......

Volcanoes, continued

- Composite volcanoes have trapped gas.
 - Composite volcanoes are made up of alternating layers of ash, cinders, and lava.
 - The lave is thicker than that of shield volcanoes.
 - Gases are trapped in the magma, causing eruptions that alternate between flows and explosive activity that produces cinders and ash.
 - Composite volcanoes are typically tall with steep sides.



Section 2 Earthquakes and Volcanoes

......

Volcanoes, continued

- Cinder cones are the most abundant volcano.
 - Cinder cones are the smallest and most common volcanoes.
 - Large amounts of gas are trapped in the magma, and violent eruptions of hot ash and lava occur.
 - Cinder cones tend to be active for only a short time and then become dormant.





Section 2 Earthquakes and Volcanoes

.....

Volcanoes, continued

- Most volcanoes occur at convergent plate boundaries.
 - 75% of the active volcanoes on Earth are located in an area known as the Ring of Fire.
 - The Ring of Fire is located along the edges of the Pacific ocean, where oceanic tectonic plates are colliding with continental plates.



Section 2 Earthquakes and Volcanoes

.....

0

End Of Slide

Ring of Fire





Section 2 Earthquakes and Volcanoes

......

Eno

Volcanoes, continued

- Underwater volcanoes occur at divergent plate boundaries.
 - As plates move apart at divergent boundaries, magma rises to fill the gap.
 - This magma creates the volcanic mountains that form ocean ridges.
 - Iceland is a volcanic island on the Mid-Atlantic ridge that is growing outward in opposite directions.

Chapter menu

Copyright © by Holt, Rinehart and Winston. All rights reserved

Resources



Section 2 Earthquakes and Volcanoes

Volcanoes, continued

- Volcanoes occur at hot spots.
 - Some volcanoes occur in the middle of plates.
- Mantle plumes are mushroom shaped trails of hot rock that rise from deep inside the mantle, melt as they rise, and erupt from volcanoes at hot spots at the surface.
 - The plumes remain in the same place as the tectonic plate moves, creating a trail of volcanoes.
 - The Hawaiian Islands are an example of this type of volcanic activity.

Chapter menu



Enc



Video volcanos & questions



•

Cool down

How many main types of volcanos are there?
 3

2. Where do most volcanos occur: Along convergent boundaries



